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Mariant

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[54] THREE DIMENSIONAL IN-FILLING VASO-OCCLUSIVE COILS

[75] Inventor: **Michael J. Mariant**, San Jose, Calif.

[73] Assignee: **Target Therapeutics, Inc.**, Fremont, Calif.

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[52] **U.S. Cl.** **606/191**; 606/194; 606/200; 606/198

[58] **Field of Search** 606/151, 158, 606/198, 200, 191, 194

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Primary Examiner—Michael Powell Buiz
Assistant Examiner—Mark S. Leonardo
Attorney, Agent, or Firm—Morrison & Foerster LLP

[57] **ABSTRACT**

This is an implantable vaso-occlusive device. It is a complex, helically wound coil comprised of a primary helically wound coil which is then wound into a specific secondary shape. The final shape upon deployment is in the approximate shape of an anatomical cavity. upon deployment, the device first fills the periphery of the cavity and then continues to infill the center. The device is a self-forming shape made from a pre-formed linear helically wound. Fibers may be introduced onto the device and affixed to the pre-formed linear member. The constituent member may be also be covered with a fibrous braid. The device is typically introduced through a catheter. The device is passed axially through the catheter sheath and assumes its form upon exiting the catheter without further action. The invention also includes methods of winding the vaso-occlusive device into appropriately shaped forms and annealing them.

11 Claims, 3 Drawing Sheets